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ABSTRACT

The purpose of this study was to compare the effects of the Eckerd Wilderness Camping Program with those of the Florida Training Schools (rehabilitation institutions) on delinquent youths. Effects of these different treatment modes were measured in terms of school adjustment and court contact of each group at 6, 12, and 18 months after release or parole date. The sample population consisted of 120 males (aged 8-15), 60 of whom were Eckerd camp graduates and 60 of whom were Florida Training School graduates. Descriptive information derived from institutional records included: offenses committed, severity of offenses committed, length of enrollment in school, and achievement level in school. Results indicated: (1) prior to program entry Eckerd campers were younger, had a lower grade of entry, had more youth convictions one year prior to entry, committed more severe crimes, had fewer legal referrals for all years, had a greater number of prior youth commitments, and had a higher IQ than the state group; (2) during the first 6-month period, Eckerd campers had significantly fewer contacts, did not differ in severity of offenses committed, remained in school longer, and attained a significantly higher level in school than the state group; (3) during the second and third 6-month period there was no difference between the two groups in number of court contacts or in severity of offenses committed and Eckerd campers remained in school slightly longer and attained a significantly higher academic achievement level than the state group. (JC)

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A COMPARATIVE STUDY
OF TWO TRAINING PROGRAMS
IN FLORIDA FOR DELINQUENT YOUTHS:
ECKERD WILDERNESS CAMPING AND STATE TRAINING SCHOOLS

PENSACOLA, FLORIDA 32504

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A COMPARATIVE STUDY
OF TWO TRAINING PROGRAMS
IN FLORIDA FOR DELINQUENT YOUTHS:
ECKERD WILDERNESS CAMPING AND STATE TRAINING SCHOOLS

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CHAPTER I

INTRODUCTION

Delinquent behavior in the adolescent population is reaching epidemic proportions. National estimates for the years 1960-1975 (See Table 1) indicate that the total number of delinquency cases handled by juvenile courts have increased by 158.2%, while the population of 10-17 year olds has increased by 30.3%. Few social problems rival juvenile delinquency, as a source of concern and urgency. Increased public attention and growing awareness has awakened state and local governments to the need for increased funding levels to support training schools, community based facilities, as well as a number of innovative alternatives.

As in previous years, the Secure Detention program experienced overcrowding during Fiscal Year 1977-78. Indeed, the number of youths detained in Health and Rehabilitative Services (HRS) operated detention programs is excessive in terms of national stand-

Table 1

Children's Cases Disposed of by Juvenile Courts: 1960 to 1975

Item	1960	1965	1970	1975
Population 10-17 years old----------------1000--	25,368	29,536	32,614	33,045
Delinquency cases excluding traffic-------1000--	510	697	1,052	1,317
Per 1000 population 10-17 years old-----------	20.1	23.6	32.3	39.9
Male-----------------------------------1000--	415	555	800	1,002
Female---------------------------------1000--	99	142	252	315
Percent of total cases---------------------	19.3	20.4	24.0	23.9

Source: U.S. Bureau of Census, 1978

> ards and comparisons with rates of detention in other states. (Florida HRS, Note 1, p. 1)

The evolution of training schools for youthful offenders can be traced from the pioneer statute establishing the Juvenile Court of Cook County, Illinois, in 1899. The philosophy of this statute was that whatever the immediate act may be that brings a child into the court system, the issues presented are, in essence, problems involving understanding, guidance, and protection, rather than criminal responsibility, guilt or punishment (Glueck and Glueck, 1950).

From its inception, and in spite of the fact that training school administrators have hired increased numbers of professional educators, social workers, counselors, psychologists, and psychiatrists, most efforts to improve social rehabilitation and recidivism have proven to be well-meaning, but their impact equivocal.

Training schools have attempted compensatory education, vocational training, individual therapy, group counseling, and group therapy. Many of these innovations show promise in specific situations; however, most have made little or no lasting changes in the aberrant behavior of wayward youths. Training schools are still turning out more youngsters going on to further criminal activities and future incarceration in adult prisons, than youngsters who reenter the mainstream of society (Willman and Chun, 1973). Literature concerning juvenile delinquency suggests that current correctional system methods may not only be ineffective, but may even result in undesirable results (Wolfgang, Figlia, and Sellin, 1972). Moreno and Jennings (1947) found evidence that in prisons and reformatories the most popular individuals were those who had an outstanding record of antisocial activities. Buehler, Patterson and Furniss (1966) noted evidence suggesting that, within an institutional setting, the delinquent peer groups provided massive schedules of positive reinforcement or punishment for socially conforming behavior.

The task of rehabilitating the juvenile delinquents in our society is an imposing one and is being approached by multiple methods. Various state and private institutions provide means by which society can assist with the treatment process. Breining (Note 2) noted that, although each institution was unique in its organizational and physical setup and in the methods of treatment, the basic theories upon which each program is based appeared to be very similar. Breining stated four basic theoretical assumptions appear to be inherent in nearly every institutional approach to treatment of maladjustments.

The first theoretical assumption of most institutions is that when an individual grows sufficiently out of harmony with whatever patterns of behavior society has decreed are normal and beneficial to the well-being, security and continued existence of society, that individual constitutes a threat to society. In addition, the individual involved is not receiving the maximum benefits of his own personal capacities.

The second theoretical assumption is that personality can be changed and that these changes will be reflected in the individual's behavior to the benefit of both society and the individual in question. This assumption is the very foundation upon which all psychological sciences are built. Otherwise, no treatment would be attempted.

A third theory underlying the very existence of an institution is that it is justifiable and beneficial to remove certain maladjusted persons from their respective "natural" environments and place them into relative isolation in order to induce a favorable change in their personality structure.

The fourth basic theory underlying institutional treatment is that improvements of personality structure, which the individual manifests in his relatively isolated, artificial environment, will be carried with the individual when he leaves the institution.

Background of the Problem

Recognizing the need for centralized direction and leadership, the State of Florida has charged the Department of Health and Rehabilitative Services with the responsibility for the operation of a system for rehabilitating juvenile delinquents (Florida, 1967). To meet this responsibility, Health and Rehabilitative Services directs the Youth Services Program.

The Youth Services Program offers a wide range of programs for committed and non-committed juvenile delinquents. Non-residential programs available for non-committed juvenile delinquents include Try Centers, Intensive Counseling and Associated Marine Institutes. Residential programs for committed juvenile delinquents include San Antonio Boys Village, Group Treatment Homes, Halfway Houses, Start Centers, Eckerd Wilderness Camps, and Training Schools.

The history of the Florida Training Schools for male youthful offenders can be traced from its beginning in 1900 to the present. The treatment of youthful male offenders has ranged from the practice of indenture and corporal punishment to the present use of Reality Therapy (Lundrigan, 1975).

The Florida Department of Health and Rehabilitative Services operates four Training Schools for the rehabilitation of juvenile delinquents. The Training Schools are all located in rural areas, and function largely as self-contained units. Each Training School has its own school system, with vocational, as well as academic classes.

Each Training School operates its own treatment program, which is based upon Reality Therapy, and is implemented through guided peer group interaction sessions (Lundrigan, 1975).

The philosophy and techniques of Reality Therapy, as a group treatment approach, in combination with Positive Peer Culture is the basic treatment approach employed in Training Schools. In utilizing this approach, each person receives an opportunity to share personal experiences, problems, and insights with a group of peers (Florida, HRS, Note 3).

The stated objective of the Florida, HRS (Note 3) treatment program is to assist each person committed to a Training School in the achievement of change. Peer influence is the vehicle of change, and change is achieved through following a structured treatment program. Each student is helped to:

1. Identify individual problems.
2. Work on solving problems.
3. Overcome sitting on problems.
4. To help each other go home.
5. To make it at home.

Glasser (1965) noted that anyone involved in helping another person to become a more responsible person must become involved with the person, must reject behavior which is unrealistic, and must teach the person better ways to fulfill his needs within the confines of reality. To meet these essential elements of Reality Therapy, students at Training Schools are organized in small groups. Normally the group will consist of 9 to 10 students and one staff member. Students are grouped in cottages in such a way as to allow maximum involvement with their peers. They live together, work together, go to school together, eat together, and constantly observe one another, so that they come to know each other exceptionally well (Florida, HRS, Note 4). This organization then becomes the means for showing concern and care which are essential elements of the helping process.

An alternative to the Training School is the Eckerd Wilderness Camps. The Eckerd Wilderness Camps provide long-term residential treatment for juvenile delinquents and emotionally disturbed youths. The history of the Eckerd Wilderness Camps in Florida is relatively short. The first camp was established in 1968 (Jack and Ruth Eckerd Foundation, Note 5). However, the history of the theoretical base and the operational mode has been well-established. Eckerd Wilderness Camps were formalized using the principles established by Campbell Loughmiller at the Dallas Salesmanship Camp for Boys. The Dallas Salesmanship Camp for Boys has operated continuously since resuming its operations in 1946 following World War II (Breining, Note 2; Loughmiller, 1965).

Loughmiller (1965) viewed therapeutic wilderness camping as an outdoor adventure in group living and rehabilitation for the emotionally problemed child. The intervention program revolves around the camp, the camper, and the group.

The camp represents a place of security where the individual can be removed from the pressures of daily living, while determining who he is and what he can do (Loughmiller, 1965; Hallowitz, 1950; Morse, 1947). Such wilderness therapeutic camping offers a constant challenge and freedom of expression, basic necessities of a child's world. Each camp function relates in some way to home, school, or community (Loughmiller, 1965).

Each Eckerd Wilderness Camp compound consists of approximately 500 acres of wilderness land located in an isolated area of Florida. The only permanent fixtures on the compound are the service buildings. The service buildings house the central office for operations, a dining hall-galley, storage rooms for supplies, and a camp library.

Each compound consists of five individual campsites located in decentralized areas. The distance between the individual campsites is sufficient to preclude hearing others or interaction between camp groups. Each campsite is selected, planned, constructed, and maintained by the campers (Jack and Ruth Eckerd Foundation, Note 5).

The incoming campers have a long history of failures which have undermined their self-confidence. They are hostile toward adults, impulsive in their behavior, and defiant of authority (Kimsey & Frost, 1969). The majority come from broken homes (Watson & Wittwer, 1977). They have failed in their schools, are unable to get along with their peers, and have found few adults who understand them and are able to help them. Their resentment, hostility, and hatred cause them to behave in ways that are unacceptable to society. "They either withdraw into themselves, and become candidates for a mental institution, or fight back in a manner that brings them into conflict with the law" (Loughmiller, 1965, p. 5).

Campers are organized into groups of 10 and supervised by two trained counselors. The size of the group was not arbitrarily established by camp management. Considerable experimentation with group size was required before arriving at 10 (Loughmiller, 1965). The groups are continuous. That is, there is always a nucleus of campers who have experience, both in time and development, to ensure the stability of the group.

Within the wilderness environment, the composition of the group is essential for a situation that calls for a wide variety of abilities (Loughmiller, 1965). It would be impractical for the group to consist of all campers who are withdrawn, or a group who are all acting out. The group needs a balance of campers who act out, or are withdrawn, small, large, slow, fast, dull, normal, or socially sharp. Each camper needs to complement the other members of the group and the group as a whole. Diversity within the group permits each camper to exhibit his individual skills, thereby, being a leader under certain conditions of group endeavor. Diversity within a group also provides the camper an opportunity to learn to appreciate people of different types (Loughmiller, 1965). Living together 24 hours a day, in a wilderness environment, and under the guidance of counselors, the group strives for personal growth and solid values. Reality Therapy techniques have been developed for this natural setting (Jack and Ruth Eckerd Foundation, Note 5).

Control and discipline are simple problems to be solved within a cooperative group process, much as climbing a mountain or canoeing down a river. Whenever a problem arises, the group activities are stopped and a group discussion of the problem is held. A resolution of the problem must be made before group activities are continued (Jack and Ruth Eckerd Foundation, Note 5). In addressing the question of education at camp, Loughmiller (1965) stated:

> What does education consist of in the first place? It involves a learner and a teacher, but the teacher may be a person or a situation-or both. Two priceless ingredients of the edu-

> cative process are interest and curiosity, part of what is often referred to as motivation. It would be hard to find a richer environment than camp for the development of these two ingredients. The same general tools of learning are used whether in the classroom or outside, whether the subject matter is from a book or from experience, but it is far easier to develop interest in those things which have direct and immediate influence on the life of the learner. Education at camp, therefore, does not take place at any given period of the day, but is a part of all living. It is emphasized in connection with those things that have the greatest emotional appeal to the boy. (p. 33)

Literature suggests that the number of wilderness camps operated by universities, state agencies, and private foundations are increasing. Fremouw, Byers, Brunts, and Hawkins (Note 6) in their review of the history of therapeutic camping noted that camps had been implemented on a day-camp basis, a two-week basis, a summer-long basis, and a year-round basis. They also stated "the program descriptions have uniformly applauded therapeutic camping as an effective and innovative therapy for emotionally disturbed children" (p. 1). Among those involved with wilderness camping, there appears to be a feeling that positive changes in behavior take place, as a result of the activities the participants engage in (Jack and Ruth Eckerd Foundation, Note 5; Loughmiller, 1965). However, there is limited documentation available to support these feelings.

Statement of the Problem

Given then the need for treatment of juvenile delinquents and two kinds of institutions considered here where the interventions or treatments are applied, the question that must be answered is the relative effectiveness of each program.

The problem that this study addressed is: Did juvenile delinquents, referred by the Florida Department of Health and Rehabilitative Services to the Eckerd Wilderness Camping Program, differ significantly after treatment from a comparison group referred to Florida Training Schools on the variables of school adjustment and court contacts?

Purpose of the Study

The purpose of this study was to compare the effects of the Eckerd Wilderness Camping Program with the Florida Training Schools by comparing the variables of school adjustments and court contacts, using a sample group participating in the camping program and a comparison sample from the Training Schools population. This study collected and analyzed data to provide management with a da~~ta~~ base for the decision making process regarding future programs.

The following statements served to further clarify the specific purposes of the study:

1. To determine whether a comparison group of training school graduates differed significantly from participants in the camping program when measured by the variables of school adjustments and court contacts at 6, 12, and 18 months after release or parole date.
2. To provide descriptive information and recommendations that will be used for future program development, modification, and implementation.

Hypotheses

The hypotheses for this study were tested utilizing data collected from institutional records. Court records were examined for court contacts and severity of offenses. Severity was determined utilizing Federal Bureau of Investigation arrest codes. School records were examined for achievement levels and length of enrollment. A statistical significance level of .05 was used for this study.

The following hypotheses were tested:

H_1: There is no significant difference between participating and comparison groups on the variables of school adjustment and court contacts, as measured by an examination of these variables 6 months after release or parole date.

A. There is no significant difference between participating and comparison groups on the variable of school adjustment when the variable of court contacts is held constant.

B. There is no significant difference between participating and comparison groups on the variable of court contacts when the variable of school adjustment is held constant.

H_2: There is no significant difference between participating and comparison groups on the variables of school adjustment and court contacts, as measured by an examination of these variables 12 months after release or parole date.

A. There is no significant difference between participating and comparison groups on the variable of school adjustment when the variable of court contacts is held constant.

B. There is no significant difference between participating and comparison groups on the variable of court contacts when the variable of school adjustment is held constant.

H_3: There is no significant difference between participating and comparison groups on the variables of school adjustment and court contacts, as measured by an examination of these variables 18 months after release or parole date.

A. There is no significant difference between participating and comparison groups on the variable of school adjustment when the variable of court contacts is held constant.

B. There is no significant difference between participating and comparison groups on the variable of court contacts when the variable of school adjustment is held constant.

Delimitations of the Study

The delimitations of this study were as follows:

1. The subjects of this study were limited to juvenile delinquents adjudicated by the courts of Florida.
2. The participating group was selected from the rolls of the Eckerd Wilderness Camp E-MA-CHAMEE For Boys, Milton, Florida. The youths must have successfully completed the camping program prior to January, 1978.

3. The comparison group was selected from the rolls of the Arthur G. Dozier School For Boys, Marianna, Florida, and the Alyce D. McPherson School, Ocala, Florida. The youths must have completed the Training School program prior to January, 1978.
4. The measurement of court contacts was limited to the institutional records of the state courts of Florida.
5. The measurement of school adjustment was limited to the institutional records of the schools in which the participants are, or were enrolled.

Limitations of the Study

Campbell and Stanley (1963) discussed factors which effect validity for quasi-experimental designs for research. Griffin (Note 7) noted, in his review of studies of therapeutic camping, that the problem with end-product studies was the unpredictable and uncontrollable influence of other factors. Wrightstone, Hogan, and Abbott noted that a major problem with longitudinal, end-product evaluation was the difficult task of separating school achievement from the influence of home and neighborhood, that is the inability to isolate specific causes of behavior from among the multiple potential causes both from within and outside the treatment program. He stated that:

> The identification and measurement of these within and without . . . interactive effects, is an overwhelmingly complicated undertaking. It may be then that assignment of responsibility to the specific individuals who contribute to . . . achievement will never be feasible, and that responsibility may have to be allocated to a more comprehensive unit. (p. 3)

Since the design selected for this study utilized institutional records and nonreactive measures, the items of testing, instrumentation, regression, mortality, and selection were not seen as a source of reduction of internal validity. The present study did not provide for experimental isolation, therefore, the inability to control history was a weakness in the design. History is a design weakness prevalent in most studies of the social sciences. Therefore, any conclusions arrived at, or recommendations made from this study must consider this source of invalidity. Maturation is another source of invalidity which must be considered. However, since the time-series design has multiple observations over a period of 18 months, maturation can be assumed to affect the participating groups in a similar manner (Campbell & Stanley, 1963).

South (Note 8) noted one of the weaknesses in a study of this type is that what constitutes "treatment" is not clear. Therefore, organizational descriptions of the theory presumably followed in dealing with juvenile delinquents does not clarify what the major treatment was that was actually experienced by the juvenile delinquents. A number of sources of ambiguity may be noted in a setting in which treatments are administered. Ambiguity revolves around the dual tasks of custody and treatment, ambiguities in staff relationships, and the training situation itself (Coser, 1979).

All inferences are limited to the population described, and all variables, subjects, or situations not so specified are considered beyond the scope of this study.

Definition of Terms

Minor terms were defined, as they were used in the body of the research. Major terms used are defined as follows:

Reality Therapy is a specialized learning procedure which is made up of three separate, but intimately interwoven, procedures. First, there is the involvement; the therapist must become so involved with the patient that the patient can begin to face reality and to see how his behavior is unrealistic. Second, the therapist must reject the behavior which is unrealistic but still accept the patient and maintain his involvement with him. Last, and necessary in varying degrees depending upon the patient, the therapist must teach the patient acceptable ways to fulfill his needs within the confines of reality (Glasser, 1965).

Short-term for this study is defined as those intervention programs which last for 3 months or less.

Long-term for this study is defined as those intervention programs which last for 3 months or more.

Juvenile delinquent is defined as a minor, who commits criminal acts, and is adjudged by a state court to be a juvenile delinquent.

Successful completion of the Eckerd Wilderness Camping Program is defined as being released from the program, except under the following circumstances:

A. Camper removed from the program by referring agency or parents without the consent of the Camp Director.

B. Camper removed from the program due to court charges which occurred prior to entry.

C. Camper dropped from active roll due to being on runaway status past the nine days grace period.

D. Camper released from camp due to organic brain dysfunction or physical handicaps which were diagnosed after entry.

A committed child is defined as an adjudicated delinquent whom the court has placed under Youth Services' active control, including custody, care, training, treatment, and furlough into the community.

A non-committed child is defined as an adjudicated delinquent or adjudication withheld delinquent whom the court has placed under Youth Services' supervision. Youth Services does not exercise active control of the child.

Furlough is defined as the release of a child, pursuant to an executed conditional agreement, from a Youth Services treatment program to supervision in the community.

Nonreactive measures are defined as those things which are already available in the institutional records and, when used, will not intrude into the individual's present personal life.

Recidivism is defined as the recommitment of a juvenile delinquent to a Youth Services Program, as a result of legal action taken by a juvenile court.

CHAPTER II

REVIEW OF RELATED LITERATURE

This chapter will be in four parts consisting of a review of literature relating to (a) juvenile delinquency, (b) recidivism, (c) group therapy, and (d) therapeutic camping.

Juvenile Delinquency

A review of literature relating to juvenile delinquency revealed an inadequate knowledge of crime causation. Nevertheless, progress has been made in society's official attitude toward treatment of juvenile delinquency. This progress is evidenced by the establishment of juvenile courts with special judges presiding over them, the elimination of criminal proceedings against juveniles, social investigations and representation of the interest of the child by probation officers, provisions for allowing the juvenile offender to remain at home under the supervision of the probation officer or a social worker, placement of the juvenile in a suitable home, where necessary; assistance to the youthful offender in the form of understanding, guidance, and protection rather than placement of criminal responsibility or punishment (Glueck & Glueck, 1950).

Glueck and Glueck (1950) stated the opinion or doubts that even though society had made great progress in its attitude toward juvenile delinquency, the critical element necessary for preventing juvenile delinquency is still missing: the adequate knowledge of crime causation. How can social institutions rehabilitate maladjusted youths when the basic cause of maladjustment is unknown?

Characteristics

Glueck and Glueck (1934) identified several variables which had probable causal relationship. Certain physical attributes were found to be dominant. Delinquents, as a group, tended to have a lean, muscular, close-knit body, one in which there was a relative predominance of muscle, bone, and connective tissue. They also found certain personality traits and emotional dynamics. As a group, the delinquents are more extroverted, lively, volatile, spontaneous, and less self-controlled than nondelinquents. They are more hostile, offensive, and destructive and do not fear defeat or failure. Delinquents are less concerned about meeting conventional expectations and are less submissive to authority. They are more socially assertive. Intellectual traits of delinquents indicate that they tend to express themselves intellectually in a direct and concrete manner. There appears to be a somewhat greater emotional disharmony connected with their performance of intellectual tasks. In their behavior at school, they again display evidence of restless energy and difficulties in social adaptation. They do not like to follow rules and discipline. In their general misbehavior tendencies, delinquents show evidence of a driving, uninhibited energy and a thirst for adventure. This finding is supported by the success of programs where juvenile delinquents attended Outward Bound Schools (Kelly & Baer, 1971). This same craving for adventure is further evidenced in the juvenile delinquents recreational activities and companionships. They look for opportunities to express aggressive energy-output and display an added need for others as supportive companionship.

Environment

Reiss and Rhodes (1961), writing in their study of the distribution of juvenile delinquency in the social class structure, noted some implications for delinquency theory. First, they found from their study that juvenile delinquency did not appear to have a norm in all lower social-economic class areas when the rate of juvenile delinquency acts were taken as an indicator of a norm. Second, they found that a substantial number of juvenile delinquents came from residential areas where the majority of residents were classified as being in the middle or upper social-economic class.

Third, when boys were classified, according to the occupation of their parents, as high, middle, or low status groups, boys in the high status groups had somewhat higher delinquency rates than boys in the middle or low status groups. The researchers noted that from these findings, the implication for delinquency theory was: Why should juvenile delinquency be so wide-spread in some lower social-economic class areas, and not in others?

Dinitz, Scarpitti, and Reckless (1962) reported on a research project aimed at attempting to discover what insulated early adolescent boys in a high delinquency area against delinquency. Their findings were based on studying a group of 125 boys who had been identified as potential delinquents four years earlier by their teachers. They concluded that a good self-concept - a product of favorable socialization - protects boys from delinquency.

Dinitz, Reckless, and Kay (1958) reported on another study of boys from a delinquency prone neighborhood. Their findings were based on 101 boys identified as "bad" by their teachers. They found that boys who scored high on a delinquency vulnerability scale were more prone towards delinquency attitudes toward themselves and others. Mothers of high scorers agreed with their sons' more negative self and social definitions. The authors stated, "These results seemed to lend support to the thesis that an appropriate or inappropriate concept of self is an important component in delinquency and nondelinquency" (p. 233).

A number of ecological investigations have been carried out in the United States and in several other countries. These investigations show that the rates of juvenile delinquency and crime vary widely in different neighborhoods and that the rates are generally highest in the center or near the center of the city (Christiansen, 1960).

One investigation, carried out in Chicago during 1942 and based on an analysis of statistics on juvenile delinquency, arrived at six conclusions (Shaw & McKay, 1942). They noted that (1) delinquency was very unevenly distributed; (2) delinquency was highest in low-rent areas near the central part of the city; (3) delinquency rates decreased with the distance from the urban center; (4) high juvenile delinquency areas also have high crime rates in the adult age-groups; (5) areas with high delinquency rates for boys also have high rates for girl delinquency; (6) the same neighborhoods maintained the highest delinquency rates throughout a thirty-year period in spite of radical changes in nationalities and in the racial composition of the population.

Social Relationships

Croft and Grygier (1956) concluded in their study of the social relationship of truants and juvenile delinquents that the main differences were:

A. Truants had extremely few friends and delinquents had very many enemies.

B. Truants, on the whole, were more maladjusted socially than delinquents. (p. 455)

They further stated:

> Since truancy usually precedes delinquency, this finding suggests that the latter may be regarded as a kind of defense mechanism to reduce social maladjustment and to find acceptance at least among the outlaws. (p. 455)

Croft and Grygier also found that when there was a boys' club in the area of a school, both the socially well-adjusted as well as the maladjusted join. However, after a short time, the maladjusted ceased to attend the club.

Robins and Hill (1966), in assessing the contributions of family structure, class and peer groups to juvenile delinquency, identified relationships which both supported and contradicted the findings of other researchers. Their sample consisted of 296 school boys from the St. Louis metropolitan public schools. Four variables in the school records - school retardation, apparent truancy, guardian's occupation, and father's presence or absence - were tested for significant relationships to the occurrence of delinquency. They noted that truancy and guardians having a low status occupation were found to be related to delinquency at a statistically significant level; school retardation was close to significance. About a third of the boys with truancy, retardation, or a lower status guardian eventually became delinquent, compared with one-fifth of the remainder. However, no relationship was found between father's presence or absence and delinquency This finding was supported by Maskin and Brookins (1974); but lacked support in other research studies (Glueck & Glueck, 1934; Monahan, 1957; Kelly & Baer, 1971).

Recidivism

Studies relating to recidivism among juvenile delinquents constituted a formidable array of literature. Within the literature were studies relating to, among other things, causal factors, predictive means, and programs which had been evaluated using recidivism as the success factor.

Parental Composition and Recidivism

Literature revealed that much controversy exists over the effects parental composition has upon recidivism rates. Glueck and Glueck (1934) reported on a sample of 500 matched pairs of delinquents and nondelinquents in which they found that 60.4% of the delinquents and 34.2% of the nondelinquents came from broken homes.

Monahan (1957) found that delinquents from broken homes were more likely to be recidivists than delinquents from unbroken homes.

Kelly and Baer (1971) in their study of a group of adjudicated juvenile delinquents from Massachusetts who attended Outward Bound Schools, noted that an important finding was the relationship between recidivism and the presence of both parents in the home. They reported that subjects in their experimental group who returned to homes in which both parents were present had a significantly lower rate of recidivism than the rate for the boys who returned to other types of home conditions.

Toby (1957) noted that the most common observation about the effect of the broken home was that delinquent girls came from broken homes more often than delinquent boys. He suggested that the family exercises more control over girls, hence they are more affected by a broken home.

Maskin and Brookins (1974) reported on a study which investigated the effects of parental composition upon recidivism rates in delinquents. All were first-time offenders and their ages ranged from 13 to 17. Within the sample, 44% came from homes of natural parents. However, within the residential and after-care programs, 59.5% and 54.1% of the recidivists came from the natural parent category. They reported that the results suggested that the broken home as generally described is a poor predictor of recidivism. This finding was supported by Robins and Hill (1966).

Physical Challenge and Recidivism

Kelly and Baer (1971) found Outward Bound to be associated with lower recidivism. In a series of studies conducted for the state of Massachusetts, three different Outward Bound Schools were studied. Each school had a different rating depending upon the physical challenge required to successfully complete the objective of the program. The objective of Outward Bound is to devise a set of circumstances where the delinquent youth can demonstrate to himself that he is capable of doing more than he thinks he can. All Outward Bound programs stress physical conditioning, technical training, safety training, and team training. In addition, finding that Outward Bound graduates recidivated less, they also found that the more severe challenging school graduates recidivated less than the graduates of less challenging schools.

In an evaluation study of the Weekend Rangers, an action demonstration program designed to reduce the volume and seriousness of delinquent behavior among lower class male youth, Noble (1966) found statistical evidence did support the conclusion that the Weekend Rangers Program, as a whole, had an impact in reducing the volume and seriousness of offenses committed by juvenile delinquents who had participated in the program. Noble also found the Weekend Ranger Program had no impact, either positive or negative, on value orientation, attitudes, or self-concept of the exposed demonstration population.

Rural vs. Urban and Recidivism

In a study taken from 172 case records in Oklahoma covering a time span of 11 years, Taylor (1972) found empirical evidence to support the conclusion that many of the delinquency related problems found in urban areas are also present in rural areas. These problems include broken homes, low income, high dropout rate from schools, and parent-child conflicts. While not in direct conflict with these findings, a study in Florida (Note 9) concluded that juveniles paroled from Training Schools who resided in rural communities, are most likely to succeed on parole.

Intelligence and Recidivism

Early literature revealed that, as late as 1919, adherents of the psychological school of crime believed that the greatest single cause of delinquency and crime was low grade mentality (Shulman, 1951). Later studies (Prentice & Kelly, 1973; Shulman, 1951) concluded that no relation could be found between intelligence quotients and recidivism.

Predicting Recidivism

The literature on predicting recidivism is formidable. However, from a sampling of the literature, certain factors are predominate. Kirkpatrick (1937) found that among first offenders factors relevant to recidivism are age, color, school grade, school problem, number of children in family, neighborhood, type of offense, and the number of agencies in contact with the family (p. 357). Arbuckle and Litwack (1960), in a study of recidivism among juvenile delinquents, used a list of 163 variables centered in seven areas concluded that:

1. Height - the taller the boy, the more likely he would succeed.
2. Mother's age at time of boys commitment - the older the mother, the more likely a success.
3. Father ever in jail - if the father was never in jail, the boy was more likely to succeed.
4. School grade completed - the higher the grade reached by the boy, the more likely he would succeed.
5. Age at first court appearance.
6. Age at time of commitment.
7. Age arrived at training school - items 5, 6, and 7 are interrelated. The older the boy in each case, the more likely he would succeed (p. 46).

These findings were supported by other researchers (Glueck & Glueck, 1950; Florida Parole Prediction Study, Note 9; Saake, 1976).

Politically, recidivism becomes the primary criterion for institutional success. State and local governments, which provide funds to operate rehabilitation programs for youthful offenders, become concerned when participants of the programs have a high rate of recidivism.

Group Therapy

Group Development

Literature relating to the theoretical approach to training by group methods suggested that if certain organic properties of groups were brought into focus, then the identification of the means to understand group development, learning, or movement toward maturity could be made (Bennis & Shepard, 1956). Group communication is the principal property in group development. The group can resolve its internal conflicts and move toward accomplishment of its goals only if means for communications are available. Group anxiety is highly correlated positively to group communications. Individuals within the group can resolve internal conflicts if anxiety does not interfere. The individual's internal communication system cannot function properly if anxiety is present. Bennis and Shepard stated that, "The core of the theory of group development is that the principal obstacles to the valid communications are found in the orientations toward authority and intimacy that members bring to the group" (p. 417). The recent writings of Sereno and Bodaken (1975) and Wilmot (1975) stressed that the participants in any communication event were highly interdependent upon one another. Individuals engaged in communication are simultaneously influencing one another and are both senders and receivers at all times.

Proponents of therapeutic camping have long recognized and used this basic theory of group development. Loughmiller (1965) implied that the entire structure of the therapeutic camping program was such that it enabled a troubled youth to find security and tranquility within the camp. The physical setting of the camp itself is simple and uncomplicated. Only the essential elements required for health and comfort are present. The organization is decentralized in the sense that the various groups are separated throughout the entire camp which provides a means for each group to remain small and simple. The daily routine remains slow and simple. Only the rules and regulations required for safety of the campers are enforced. Each goal to be accomplished is one which the group is capable of handling. Time is available to discuss problems encountered. The treatment of each camper from the very first meeting is conducted in a manner to reduce anxiety within the individual. The individual camper must want to join the camp. A visit to the camp and a group is made before the camper moves in. The trained counselors are all aware of the individual's needs at camp and work with the individual to help satisfy these needs. The ties between the counselor and the camper form the first bonds to the group.

Characteristics of Groups

Loughmiller stated, "Groups have a life and quality of their own, determining to a large degree the progress of the members" (p. 71).

Bennis and Shepard (1956) concluded from their work that groups move through two phases. They noted that Phase I activity generally centers on broad role distinctions; Phase II activity involves deeper concerns such as failure, warmth, and retaliation. The group in Phase I emerged out of a collection of individuals while the individuals in Phase II emerged out of the group.

Loughmiller (1965) stated, "Of central importance is the fact that the groups are continuous. There is always a nucleus of boys who have progressed to the point that they lend stability to the group structure, thus allowing for the preservation and transmission of group values that originated in the life of the group prior to the presence of any of its current members" (p. 71).

Group life for delinquents is hectic and fragmented, violent and ill-sustained, but very important. Middleman and Seever (1963) noted their difficulty in relating to others. Despite all their "street" experience and various other cover-ups, delinquents have a low image of their own worth as individuals. Middleman and Seever went on to say, "Like all developing persons, much of the opinion they gain about themselves grows out of their perception of others' reaction to them. The opinion of their peers is of crucial importance" (p. 91).

Camping and Group Building

William Schwartz (1960), in describing some of the characteristics of a group in a camp setting, speaks of the high demands and expectations operating and of a

> Pool of excitement, in which each camper, in his own manner, demands immediate priority for his needs as he sees them. Group life thus begins in a hectic, competitive and highly charged atmosphere. . . . Intimacy of camp life is such that involvement with others is practically a condition of life. (pp. 92-93)

One process in group training which is used to handle disturbances within the group is the group interviewing (Morse & Wineman, 1957). Within the group, there will be disturbances. When these disturbances occur, the trained counselor should see them as raw material for helping the individuals in their personal and social adjustments. Morse and Wineman also noted that, as in individual therapy, certain processes are crucial for the interview, e.g., degree of group cohesiveness, interaction patterns between the leader and the group, power distribution within the group, and group goals. This group interview process is repeated in the literature of other therapeutic camping programs (Loughmiller, 1956; Jack and Ruth Eckerd Foundation, Note 5;

Fremouw, Byers, Brunts, & Hawkins, Note 6).

Therapeutic Camping

Rationale for Therapeutic Camping

Literature recognizing therapeutic camping as an alternative intervention strategy for troubled youth, in its various forms and configurations, indicated that it had been around a very long time (Apter, 1977). Lowry (1974) noted that the use of camping for the rehabilitation of mental patients had its roots embedded all the way back in the myth of the Golden Age; the belief that man (woman) was more "good" at an earlier stage of history than he/she is now. Apter (1977) reported this theme, that a simpler life and a return to nature would make us all healthier and happier beings, may be seen in the Noble Savage of Rousseau, the Walden Pond experience of Thoreau, and the back-to-basics movement of the last few years.

McNeil (1957) indicated that in the past fifty years, lay persons and professionals alike have witnessed the lusty coming- of-age of a dynamic conception of human motivation. The conviction that the child is the father of the man has focused our attention on prevention, rather than repair, of psychological deficit or damage, and this philosophy has had an impact on every movement devoted to work with children. The importance of early formative experiences and recognition of disturbance in our youth have prevailed to press child facilities into therapeutic service.

Literature revealed that during the early years, psychodynamic theory served as the base of most therapeutic camping programs. In recent years, many new programs have been developed on the basis of more behavioral learning theory.

Morse (1947) listed seven basic advantages to Therapeutic Camping Programs (p. 212):

1. Twenty-four hour control without institutionalization.
2. A real living situation for therapy.
3. Relaxed routine without punitive discipline.
4. Opportunity to see the child in actual relationships.
5. Motor outlets to reduce tension.
6. Creative learning experiences without school formalities.
7. Exciting adventures without antisocial activities.

McNeil (1962) added to these basic advantages when he stated:

> A therapeutic camp has more to offer the disturbed child than the enjoyable, but hardly curative, fresh air, swimming, and nature lore. In the diagnosis

> and treatment of emotional disorders of youth, a therapeutic camp has a number of singular advantages. It can provide a 24 hour a day controlled living situation without the drawbacks of permanent institutionalization and can eliminate the artificiality of office therapy by substituting corrective guidance during the natural activity of camping and play. (p. 116)

Hughes and Dudley (1973) described therapeutic camping as an opportunity for a troubled child to "see himself as he really is, reflected in a relationship with a protective group, supported and cared for when needed but held to a responsible role within the group." (p. 49)

It is interesting that parents will willingly send children to a camp for help because camping is considered "good", although they would be unwilling to commit the same child for even a short period of treatment in a psychiatric setting. Since the boy, too, sees himself as a camper before he sees himself as a patient, a camper placement may provide needed institutional care with the least traumatic separation for the child (Morse, 1947).

Positive and Negative Views of Therapeutic Camping

The literature on therapeutic camping as an alternative intervention for emotionally disturbed and delinquent youth appeared to be singularly free of anything resembling an "unequivocal statement" as to its effectiveness. This may be in part because of the scientific caution or because the problem is so complex (McNeil, 1957). Writings on the topic of therapeutic camping appeared to be on a continuum from the enchanted to the disenchanted.

For those who viewed therapeutic camping as a positive intervention for juvenile delinquents, the literature suggested that, in addition to the basic advantages listed by Morse (1947) and McNeil (1962), there are some other major benefits attributable to therapeutic camping programs.

Hallowitz (1950) noted that one of the greatest values camping has for children was learning to live in a community. Each camper has an opportunity to experience and learn to live with a new family. The camper brings with him into camp old views, skills, and attitudes about living. The camper comes from an environment which is geared to meet the needs of the family. Therefore, there is much hustle and bustle as the family moves about to meet the family schedules. There may be work hours to meet, family shopping to be done, school classes to be met, and the numerous other agenda items which face the family. In the new family life at camp, the daily programs are designed to meet the needs of the camper. Attempts are made to avoid the hustle and bustle. Campers are allotted more than sufficient time to get from one activity to the other.

Group programming, planning, and organization of campers depend largely upon the program. Short term camping programs (Hallowitz, 1950) reported very little group planning with the campers. Everything was planned by the staff prior to the arrival of the campers. Long term camping programs (Loughmiller, 1965) reported considerable time spent in group planning and group organization. Each type of program appeared to provide for a slow pace, with as few rules as possible, and easy to accomplish goals. The counselor, who assumed the role of parent, geared his actions to the needs of the camper in contrast with the parent who geared his actions to meet the needs of the home or family.

McNeil (1957) noted that an important ingredient which must be incorporated into the camp program was an emphasis on the opportunity for ego-building. These skills must be learned if the camper was to manage his fears and bring his impulses under the kind of control that society demands.

One idea which appears to be inherent in all therapeutic camping programs (Hallowitz, 1950; Loughmiller, 1965) is that camp life offers an opportunity for each camper to exhibit some skills which have already been acquired and the opportunity to learn new skills. Most of the tasks to be performed at camp are designed to be simple and easy to learn. Activities are designed to be nonthreatening and therefore the campers are willing to participate and learn. Daily life in the camp offers the campers the chance to succeed at something positive and useful. Basic skills are such that each camper can master and in doing so builds his own ego by success. Loughmiller (1965) stressed the need for success of campers. Success in the eyes of the camper and acknowledgment of these successes by the group goes a long way with campers who have been nonachievers for most of their lives.

Group participation pervades all aspects of camping. This environment itself provides for increased ego-building. Barker (1963) found that where there are greater opportunities for the functional participation in group activities there is a better ego development.

However, Kolodny, Waldfogel, and Burns (1960) concluded that not all emotionally disturbed children can be helped by camping programs. If the ego-defects were too severe, the camper could find the demands of camp life intolerable.

Mayer (1972) discussed the many ego-building elements in the successful achievement of work projects. Work projects produced a positive feeling among groups for the following reasons:

1. Doing something useful brings group members closer to society, even though it may be their own.
2. Creating "something" brings about an identity.

3. Producing something on one's own brings the development of self-confidence.
4. Doing something together develops a sense of belonging and respect for each other.

Some literature relating to juvenile delinquency suggested that family composition was a contributing factor which caused a youth to become a delinquent (Glueck & Glueck, 1934; Monahan, 1957; Kelly & Baer, 1971). Within the therapeutic camping environment, there is ample opportunity for building relationships between adults and the campers.

Sessoms, Mitchell, Walker, and Fradkin (1978) found in their study of the effects of camping on handicapped children that there were significant differences between campers in certain cabins. They questioned why campers in cabin A were different from cabin B when they came essentially from the same population. The researchers concluded that the differences had to be caused by the experiences had by interaction with the campers in the cabin and the counselors assigned to it. McKenzie (Note 10) noted that the growth of a camper depended on nurture in physical, mental, and psychosocial areas as each camper was stimulated to change for the better, a process of "growth". Several factors affected camper growth. Program activities helped campers to learn by doing the tasks essential to survival. Peer pressure within each camp group was guided to bring about helpful influences on a camper. However, it was the positive adult modeling that provided the basic relationship which enabled the other factors to function therapeutically. Rogers (Note 11) stressed the importance of therapeutic modeling when he stated:

> The more I can be genuine in the relationship, the more helpful it will be. This means that I need to be aware of my own feelings. . . . rather than presenting an outward facade of one attitude while actually holding another attitude at a deeper level. . . . It is only by providing the genuine reality which is in me that the other person can successfully seek for the reality in him. (pp. 2-3)

Rogers (1942) also stated, "Much well-intentioned counseling is unsuccessful because a satisfactory counseling relationship is never established" (pp. 85-86).

Literature on therapeutic camping suggested that the process resulted in improved self-concept of the camper (Kelly & Baer, 1971; Griffin & Wittwer, Note 12; Fremouw, et al., Note 6; Groves & Kahalas, 1977). The most frequent measure used in the various camping programs appeared to be the Piers-Harris Self-Esteem Scale. Barker (1963) found that when there were greater opportunities for the functional participation in group activities there was better self-concept development. There were also opportunities ~~for~~ individuals to provide leadership in camping life within a group basis. Two of the most important issues in self-concept development were happiness and satisfaction (Crowen, 1972; Musa & Roach, 1973; Norwicki, Jr. & Barnes, 1973). Camping offered opportunities for the individual to progress in these areas.

Risk (1976) reported on a research project designed to measure self-concept, personality, and values before and after a 12-day experimental wilderness survival experience. He reported positive shifts in overall self-concept following the survival experience. Risk also reported that those who participated grew significantly in their satisfaction in terms of their physical and moral-ethical selves and acquired a better feeling of acceptance for the way that they perceived themselves in general.

Another major benefit which writers attributed to therapeutic camping was the temporary separation of the camper from his family. Hallowitz (1950) wrote that:

> Inherent in the very nature of camping is the separation of the child from the family. While separation is fraught with danger, it has some very valuable

> aspects for a child who is ready for such an experience. For four weeks or more, a child can be free from the tensions and pressures in the home and the community. For this brief period, he can be on his own, free from a nagging, rigid parent who usually makes him toe the mark, or from an overindulgent one who infantilizes him so that growth is impossible. (p. 408)

Smith (1970) wrote that the majority of boys at the Salesmanship Club Boys Camp came from homes which had been damaged or destroyed by death or divorce. Smith also noted some examples of boys who could not go home after camp. For example, Roger's mother bore him when she was approximately 15 years old. Roger's mother was young, angry, and frightened, so she hid him away. Ralph never had any model but failure from a drunk father and ill mother. Tom's mentally ill mother overstimulated him sexually and used him for her own needs.

The Planning and Evaluation Unit, Division of Youth Services, State of North Carolina (1979) noted in its profile of campers at Camp E-Ku-Sumee that 65.3% of the campers' parents were either separated, divorced, widowed, or never married. This statistic suggested that campers were most likely to have a history of family instability. It was also noted that the most common problem appeared to be inadequate parenting skills. Watson and Wittwer (1977) in their study of campers at the Eckerd Wilderness Camps, noted that only 23.4% of the campers studied lived with their natural parents when they entered the program. This finding was further supported by Carter (Note 13) in his study of campers in the Eckerd program. He noted that 65.8% of a population of 161 ex-campers, came from broken homes.

Hallowitz (1950) states that, "In many cases, the mere removal of a child to camp is enough to bring about a most remarkable change in his adjustment" (p. 408).

There are those experienced camp therapists who are not so willing to accept all the benefits attributed to therapeutic camping. Chassell (1937), for example, stated, "First, camp is not a Garden of Eden" (p. 94). Writtenburg (1954) recommended using caution in accepting the assumption that camp was good for all young people. Redl (1947) concluded that the enthusiastic books on nature and its effect on man's soul had been written by people who have attained an appreciation of values which everyone may not have. Books, on the other hand, seldom discussed the child's fear of storms, animals, and nature. Perlman (1947) wrote, "Despite the many books and articles that have been written on creative camping . . . the patent and inescapable fact confronts the seriously interested student, that very little indeed can be done for a maladjusted child in a brief period." (p. 157)

Current Trends in Therapeutic Camping

Literature on the history of therapeutic camping as reported and derived from camping programs indicated its growth and some areas of concern. Analysis of current therapeutic camping programs suggests three major advantages are present.

The first advantage is a different kind of milieu. Apter (1977) noted that all the advantages that have become known in institutions as milieu therapy also existed at camp, only in a more conducive setting. The camp setting was removed from the stresses of home, city, or institutional life.

Gump, Schoggen, and Redl (1968) wrote that camping as a therapeutic instrument, involved the use of two related but distinct areas of resources. The relationships of staff with campers constituted the social area. The physical plant of the camp, and the creation and arrangements of routines, activities or programs was the milieu area. They concluded from data gathered that several related propositions were supported:

1. That milieu and complexes are coercive of the behavior and experience of campers.
2. That the effects of such milieu factors may be

determined.

3. That the milieu area and the staff social area of a camp's therapeutic resources are quite interrelated.
4. That it is possible to identify and to manipulate the specific characteristics of a given milieu unit to create certain behavioral results.

The second major advantage is the total treatment. In a different kind of milieu, described above, problems which brought children to camp will surface and will require actions from the staff members. Kimsey and Frost (1969) noted that the camp setting provides variety and opportunity to satisfy the desires most boys have for the out-of-doors. They also stated that at camp, the camper, as a member of a group, must provide for its own comfort and well-being. Survival in the camping milieu becomes a necessity. Loughmiller (1965) wrote that the group constructs its own shelters, plans and prepares its own meals, cuts wood, repairs equipment, arranges recreation, provides sanitation, and maintains trails. The boy learns to meet the basic problems of living. Apter (1977) stated that, "In an environment where all the adults are attuned to and trained to meet the needs of the camper in an open, honest, and trusting adult-child relationship, the camper can learn the skills necessary to help them cope with their problems" (p. 74).

The third advantage could be referred to as the link in the therapeutic chain. Byers (1979) reported that therapeutic camping for emotionally disturbed children has been implemented on a day camp basis, a week long basis, a two week basis, a summer basis, and a year around basis. Apter (1977) concluded that most therapeutic camps are typically short in duration; therapeutic camping programs provided the opportunity to actually observe children in a number of important situations. He felt this had an advantage over the traditional assessment in which diagnostic instruments are used to predict a client's ability to perform in a variety of situations.

CHAPTER III

DESIGN OF THE STUDY

The approach to this study was to examine two comparable groups of juvenile delinquents in the State of Florida who had completed separate and different rehabilitation programs. A time-series design, as seen in Figure 1, was utilized. The variables of court contact and school adjustment were examined at 6, 12, and 18 months following the release of the participant from his respective treatment program. Appropriate statistical procedures were then applied to the variables court contacts and school adjustment to determine if significant differences ($p=.05$) existed between the participating and comparison groups.

Population

The sample population consisted of 120 male juvenile delinquents referred to a residential treatment program by the Florida Department of Health and Rehabilitative Services. In order to select a comparable sample, all of the subjects for this study, Eckerd Wilderness Camping and State Training School graduates, met the following criteria to be

1. 8-15 years of age at the time of admission to their respective program.
2. Documented IQ of 75 or more by a recent psychological or psychiatric evaluation.
3. No physical impairments.
4. Physical ability to communicate verbally.
5. Existing family or family substitute.

	Treatment	Observation Interval (in months)			Institution
		6	12	18	
R^a	X_1	O_1	O_2	O_3	Eckerd Wilderness Camps
R^b	X_2	O_1	O_2	O_3	State Training Schools

[a] entire population for a given time

[b] stratified random sample for comparability

Figure 1

The Participating Group consisted of the last 60 campers (N=60) released from the Eckerd Wilderness Camping Program, who met the following criteria:

1. Referred to the Eckerd Wilderness Camping Program by the Florida Department of Health and Rehabilitative Services after having been adjudicated a

juvenile delinquent by a Florida court.

2. Completed the camping program successfully prior to January, 1978.

The Comparison Group consisted of the last 60 participants (N=60) from a Florida Training School, who completed the program prior to January, 1978, and met the stated criteria. The names of potential subjects were taken from the monthly discharge summary file at the state offices. The first discharge summary file used was for the month of December, 1977. The names obtained from the monthly discharge summary were then assigned a sequential number starting with the number one. Each name was then compared with the subjects state record to ensure they met the stated criteria. However, it was discovered that the state records did not contain all the data required to establish eligibility for the study. The missing data at the state offices required additional names to be added to the sample beyond the required 60. Twenty additional names were added bringing the total names selected for the study to 80. Additional data was collected by visiting the regional offices of the Department of Health and Rehabilitative Services. Those subjects in the first 60 name list, who did not meet the stated criteria were replaced with names from the supplemental list. This selection procedure provided the final list of 60 subjects to be used as the comparison group.

Data Collection

Utilizing the computerized Management Information System (MIS) of the Eckerd Wilderness Camping Program and the records of the Florida Department of Health and Rehabilitative Services, and by examining the institutional records, the following descriptive information was collected:

1. Name.
2. DYS number.
3. Referral county.
4. Race.
5. Date of birth.
6. Date of entry.
7. Length of stay.
8. Number of legal convictions one year prior to entry.
9. Number of legal convictions one to two years prior to entry.
10. Number of legal convictions two to three years prior to entry.
11. Number of legal convictions for all years prior to entry.
12. Severity of most recent conviction prior to entry.
13. Severity of second most recent conviction prior to entry.
14. Severity of third most recent conviction prior to

entry.

15. Number of youth referrals for one year prior to entry.

—16. Number of youth referrals for all years prior to entry.

17. Number of youth commitments for one year prior to entry.

18. Number of youth commitments for all years prior to entry.

19. Type of last commitment.

20. Type of next to last commitment.

21. Whom lived with prior to entry.

22. Total family income.

23. Number of children in family.

24. Birth order of subject.

25. School grade at entry.

26. IQ.

Utilizing the institutional records of the Florida Department of Health and Rehabilitative Services, the Florida courts, and the public school systems, the following data was collected:

1. Offenses committed:
   A. Six months after release.
   B. Twelve months after release.
   C. Eighteen months after release.
2. Severity of offenses committed.

3. Length of enrollment in school.
4. Achievement level in school.

Data Analysis

Kerlinger and Pedhazur (1973) stated:

> The traditional view of research amounts to studying the relation between one independent variable and one dependent variable, studying the relation between another independent variable and the dependent variable, and so on, and then trying to put the pieces together. The traditional research design is the so-called classic experimental group and control group set-up. While one can hardly say that the traditional view is invalid, one can say that in the behavioral sciences it is obsolescent, even obsolete (Campbell and Stanley, 1963; Kerlinger, 1964, 1969). One simply cannot understand and explain phenomena in this way, because of the complex interaction of independent variables, as

> they impinge on the dependent variables. (p. 4)

Therefore, the selection of the methods for treatment of the data gathered in a quasi-experimental research design, such as this study, must be judiciously made and used in order to gain insights on the complex interactions of the independent variables with the dependent variables.

Pre-Treatment Data

Initial data gathered from the institutional records of the Florida Department of Health and Rehabilitative Services and the Eckerd Wilderness Camping Program were used to describe the participating groups prior to treatment. This descriptive data is presented in tables. Each pre-treatment variable was subjected to a t-test, a statistical procedure to determine the degree of differences that existed between the groups and to determine if any differences noted were significant at the .05 level. In addition to the t-test, a correlation matrix was developed to determine the extent, if any, the pre-treatment variables correlated with each other. Any correlation coefficient less than .5 was not considered significant.

Since the literature suggested interaction between the variables selected to describe the groups, Discriminant Analysis, a multivariate data analysis technique, was also used. Cooley and Lohnes (1970), Kerlinger and Pedhazur

(1970), and Nie, Hull, Jenkins, Steinbrenner, and Bent (1970) discussed the use of Discriminant Analysis as a technique for determining uniqueness of groups in a multiple population study. Using the results of the t-test and the correlation matrix, the most significant variables were selected for use in the Discriminant Analysis.

If the assumption is made that the random selection of the sample is rigorous and is a true representation of the total population, then each group should be comparable. However, in this study, each selection criterion contained a range such that the possibility existed for each group to vary, thereby effecting the research results. Campbell and Stanley (1966) described one typical ex post facto study in which the matching was based on pre-X facts taken from the institutional records. An initial population of 2,127 high school students shrank to 1,194 after post-X interviews were conducted. The original population was further reduced to 46 useable cases after matching. The researcher in this reported study considered that 46 comparable cases were better than 1,194 noncomparable cases. Campbell and Stanley stated:

> The tragedy is that his 46 are still not comparable, and furthermore, even within his faulty argument the shrinkage was unnecessary. . . . This error and

> the reduction in number of cases are avoidable through the modern statistics. (pp. 71-72)

Post-Treatment Data

Data gathered from the records of the juvenile courts of Florida, the Florida Department of Health and Rehabilitative Services, the counselors of the individual subjects of the study, and the public school system were used to test the hypotheses of this study. A multivariate technique was used to analyze the data. Those pre-treatment variables which were considered to be significantly different between the participating and comparison groups were used in the post-treatment data analysis models. This process statistically proportioned the effects of the pre-treatment differences with the post-treatment differences while analyzing any effects the treatment process had on the subjects. All data is presented in tables and charts.

CHAPTER IV

RESULTS

This chapter will be in two sections. The first section reports the results of comparing the pre-treatment data, of two groups of juvenile delinquents in the State of Florida who had completed separate and different rehabilitation programs, to determine the degree of comparability. The second section reports the results of comparing post-treatment data on the variables of court contacts, severity of court contacts, length of enrollment in school, and achievement level in school. Comparisons were made at the 6, 12, and 18 month interval after release from their respective program to test the hypotheses of this study.

Pre-Treatment Comparison

The institutional records on subjects provided a detailed collection of demographic data that was compiled in this study. Also included was information on the subjects living and legal status prior to entry into their respective program.

County of Residence

The data revealed that the subjects in the participating group (n=60) from the Eckerd Wilderness Camping Program came from 20 counties within the state. The counties which provided the largest number of subjects were Okaloosa, Escambia, and Duval. The data also revealed that the subjects in the comparison group (n=60) from the State Training School came from 21 counties within the state. The counties which provided the largest number of subjects to this group were Escambia, Duval, Orange, Pinellas, Brevard, Seminole, and Polk. The main difference noted between the two groups was that Okaloosa County provided a large number (n=12) of subjects to the participating group and none to the comparison group, while Polk County provided a large number (n=13) of subjects to the comparison group and none to the participating group. The data on where the total population resided prior to entry into their respective programs is presented in Table 2.

Race

The data revealed the racial composition of the participating group to be 86.7% white (n=52) and 13.3% black (n=8), while the comparison group was composed of 50.0% white (n=30) and 50.0% black (n=30).

Age at Entry Into Program

The subjects in the participating group ranged in age

Table 2

County of Residence

Prior to Entry

County	Eckerd Program	State School	County	Eckerd Program	State School
Walton	1		Alachua	2	1
Okaloosa	12		Pasco	1	1
Escambia	12	5	Pinellas	1	4
Santa Rosa	3		Brevard	1	5
Jackson	1		Palm Beach	2	1
Gadsden	2	1	Seminole		7
Leon	3	2	St. Johns		1
Duval	6	4	Volusia		1
Lake	1		Jefferson		1
Citrus	2		Franklin		1
Orange	1	6	Polk		13
Marion	2	1	Collier		1
Calhoun	2		Highlands		1
Bay	4	2	Clay		1
Columbia	1				

from a minimum 10.65 years to a maximum 15.34 years at the time of their entry into their program. The mean age was 13.27 years. The age of the subjects in the comparison group ranged in age from a minimum 13.27 years to a maximum 15.54 years at the time of entry into their program. The mean age was 14.28 years. Therefore, the subjects in the comparison group averaged being 1.01 years older than the subjects in the participating group.

Number of Legal Convictions One Year Prior to Entry

Data relating to the number of legal convictions the subjects in the participating group had during the year prior to their entry into the program revealed the average camper had 1.98 convictions. The subjects in the comparison group had an average of 1.45 legal convictions during the year prior to their entry into their program. Therefore, the participating group had an average of .53 convictions more than the comparison group. The data relating to the number of legal convictions for the year prior to entry into their respective program is presented in Table 3.

Number of Legal Convictions 1-2 Years Prior to Entry

The data revealed that the participating group had a mean of .48 legal convictions during the period 1-2 years prior to entry into their program. The comparison group had a mean of .58 legal convictions during the same time period. Therefore, the subjects in the comparison group had .1 legal convictions more than the members of the participating group. Table 4 presents a breakdown of legal convictions the subject groups had 1-2 years prior to entry.

Table 3

Number of Legal Convictions

One Year Prior to Entry

Frequency Percent	1	2	3	4	5	6	7
Eckerd	28	20	3	6	1	1	1
Program	46.67	33.33	5.00	10.00	1.67	1.67	1.67
State	43	11	4	1	0	1	0
School	71.67	18.33	6.67	1.67	0.00	1.67	0.00
Total	71	31	7	7	1	2	1
	59.17	25.83	5.83	5.83	0.83	1.67	0.83

Eckerd Program: N=60 Mean=1.983 SD=1.334

State School: N=60 Mean=1.450 SD=0.909

Table 4

Number of Legal Convictions

1-2 Years Prior to Entry

Frequency Percent	0	1	2	3	4	6
Eckerd	41	12	4	3	0	0
Program	68.33	20.00	6.67	5.00	0.00	0.00
State	39	14	4	1	1	1
School	65.00	23.33	6.67	1.67	1.67	1.67
Total	80	26	8	4	1	1
	66.67	21.67	6.67	3.33	0.83	0.83

Eckerd Program: N=60 Mean=.483 SD=.833

State School: N=60 Mean=.583 SD=1.093

Number of Legal Convictions 2-3 Years Prior to Entry

Both group of subjects showed a high percentage of no convictions during this period of time. The mean number of convictions for the participating group was .23 while the mean number of convictions for the comparison group was .15. The data for this variable is presented in Table 5.

Number of Legal Convictions for All Years Prior to Entry

The institutional records revealed that the total number of legal convictions which the subjects in the participating group had averaged 2.85. The comparison group had a mean of 2.23 convictions for all years prior to program entry. The total number of legal convictions for both groups prior to program entry is presented in Table 6.

Severity of Last Conviction

The severity of the crimes committed by the subjects of this study ranged from minor youthful status offenses to the severe crime of murder. The severity offenses committed which resulted in the juvenile delinquents being committed by a juvenile court to a rehabilitation program is presented in Table 7.

Table 5

Number of Legal Convictions

2-3 Years Prior to Entry

Frequency Percent	0	1	2	5
Eckerd	51	7	1	1
Program	85.00	11.67	1.67	1.67
State	53	5	1	0
School	88.33	8.33	1.67	0.00
Total	104	12	3	1
	86.67	10.00	2.50	0.83

Eckerd Program: N=60 Mean=.233 SD=.744

State School: N=60 Mean=.150 SD=.444

Table 6

Number of Legal Convictions

All Years Prior to Entry

Frequency Percent	1	2	3	4	5	6	7	8	15
Eckerd	11	22	12	8	4	1	1	0	1
Program	18.33	36.67	20.00	13.33	6.67	1.67	1.67	0.00	1.67
State	26	18	6	3	3	2	1	1	0
School	43.33	30.00	10.00	5.00	5.00	3.33	1.67	1.67	0.00
Total	37	40	18	11	7	3	2	1	1
	30.83	33.33	15.00	9.17	5.83	2.50	1.67	0.83	0.83

Eckerd School: N=60 Mean=2.850 SD=2.089

State School: N=60 Mean=2.233 SD=1.650

Table 7

Severity of Last Conviction

Prior to Program Entry

Category	Frequency		Category	Frequency	
	Eckerd Program	State School		Eckerd Program	State School
Probation Violation	8	12	Break and Enter	10	6
Truancy	2	1	Auto Theft	3	2
Runaway (home/school)	2	0	Grand Larceny	1	1
Incorrigible	3	0	Burglary	2	15
Fam-Sch-Problems	3	2	Arson	2	1
Disturbing Peace	2	0	Assault	12	5
Drug Related[b]	2	2	Rape	1	0
Theft-Larceny	5	12	Robbery	0	1
Manslaughter	1	0	Murder	1	0

Severity of Second Most Recent Conviction

The data revealed that 16.67% (n=10) of the subjects in the participating group had only one conviction prior to entering the program. Of those who had more than one conviction prior to program entry, the crime of breaking and entering was predominate. The data also revealed that 46.67% (n=28) of those in the comparison group had only one conviction prior to entering their program. For those subjects who had more than one conviction, breaking and entering was also the crime most often committed. The severity of the second most recent conviction prior to program entry is presented in Table 8.

Severity of Third Most Recent Conviction

The data from this variable indicates that 46.67% (n=28) of the participating group had three or more convictions prior to entering the program. It also revealed that 15% (n=9) of the subjects in the comparison group had three or more convictions prior to program entry. The severity of the third most recent conviction prior to program entry is presented in Table 9.

Number of Youth Referrals 1 Year Prior to Entry

During the year prior to entry into the program, the subjects in the participating group had an average of 3.13 referrals while the members of the comparison group averaged 2.62 referrals. Table 10 presents the complete breakdown of the youth referrals for the year prior to program entry.

Table 8

Severity of Second Most Recent Conviction

Prior to Program Entry

Category	Frequency		Category	Frequency	
	Eckerd Program	State School		Eckerd Program	State School
No Convictions	10	28	Break and Enter	11	8
Probation Violation	1	3	Auto Theft	2	1
Truancy	2	1	Grand Larceny	4	2
Runaway (home/school)	3	3	Burglary	3	4
Incorrigible	5	0	Arson	1	0
Fam-Sch-Problems	3	0	Assault	1	2
Disturbing Peace	2	0	Strongarm Robbery	2	0
Drug Related	4	0	Manslaughter	1	0
Theft-Larceny	5	7			

Table 9

Severity of Third Most Recent Conviction Prior to Program Entry

Category	Frequency		Category	Frequency	
	Eckerd Program	State School		Eckerd Program	State School
No Convictions	32	51	Theft-Larceny	1	1
Probation Violations	2	1	Fraud-Forgery	1	0
Runaway	3	1	Break and Enter	12	3
Incorrigible	2	0	Auto Theft	2	1
Fam-Sch-Problems	1	1	Burglary	0	1
Disturbing Peace	1	0	Robbery	1	0
Drug Related	1	1	Kidnapping	1	0

Table 10

Number of Youth Referrals

1 Year Prior to Entry

Frequency	1	2	3	4	5	6	7	9	11	12
Percent										
Eckerd	14	18	10	9	3	0	1	3	1	1
Program	23.33	30.00	16.67	15.00	5.00	0.00	1.67	5.00	1.67	1.67
State	14	18	17	7	1	2	0	0	1	0
School	23.33	30.00	28.33	11.67	1.67	3.33	0.00	0.00	1.67	0.00
Total	28	36	27	16	4	2	1	3	2	1
	23.33	30.00	22.50	13.33	3.33	1.67	0.83	2.50	1.67	0.83

Eckerd Program: N=60 Mean=3.133 SD=2.480

State School: N=60 Mean=2.616 SD=1.637

Number of Youth Referrals for All Years

The total number of times the subjects of this study came to the attention of the Division of Youth Services prior to their entry into rehabilitative programs are reflected in the data from this variable. The participating group averaged 4.53 referrals prior to entry while the comparison group averaged 6.03 referrals. The number of youth referrals ranged from a minimum of one to a maximum of 18. Table 11 presents the data for this variable.

Number of Youth Commitments 1 Year Prior to Entry

The data from this variable reveals that the participating group averaged .28 prior youth commitments before entering the rehabilitation program. The comparison group averaged .08 prior youth commitments. Table 12 presents the data for the prior youth commitments for 1 year before entry.

Number of Youth Commitments for All Years Prior to Entry

The participating group averaged .43 youth commitments for all the years prior to program entry while the comparison group averaged .1 commitments. Table 13 presents the data for youth commitments for all the years prior to program entry.

Type of Last Commitment

The type of last commitment prior to program entry reveals that for those subjects in the participating group who had previous commitments, training schools were where they had been most often. The same situation existed for those in the comparison group who had previous commitments. Table 14 presents a complete breakdown regarding the type of last commitment.

Table 11

Number of Youth Referrals for All Years Prior to Entry

Frequency Percent	1	2	3	4	5	6	7	8	9+
Eckerd	4	15	8	11	7	5	2	0	8
Program	6.67	25.00	13.33	18.33	11.67	8.33	3.33	0.00	13.33
State	0	8	9	6	7	9	5	5	11
School	0.00	13.33	15.00	10.00	11.67	15.00	8.33	8.33	18.33
Total	4	23	17	17	14	14	7	5	19
	3.33	19.17	14.17	14.17	11.67	11.67	5.83	4.17	15.83

Eckerd Program: N=60 Mean=4.533 SD=3.331 Maximum=18

State School: N=60 Mean=6.033 SD=3.454 Maximum=17

Table 12

Number of Youth Commitments

1 Year Prior to Entry

Frequency Percent	Commitment None	 One
Eckerd Program	43	17
	71.67	28.33
State School	55	5
	91.67	8.33

Eckerd Program: N=60 Mean=0.283 SD=0.454

State School: N=60 Mean=0.083 SD=0.100

Table 13

Number of Youth Commitments

All Years Prior to Entry

Frequency Percent	0	1	3	4	5
Eckerd Program	43	14	1	1	1
	71.67	23.33	1.67	1.67	1.67
State School	54	6	0	0	0
	90.00	10.00	0.00	0.00	0.00

Eckerd Program: N=60 Mean=.433 SD=.945

State School: N=60 Mean=.100 SD=.302

Table 14

Type of Last Commitment

Prior to Entry

Category	Frequency	
	Eckerd Program	State School
Detention (nonsecure)	1	0
Detention (secure)	3	1
Halfway House	2	0
Family Group Home	3	0
Training School	4	5
Psychologic-Mental	1	0

Whom Lived With Prior to Entry

The data relating with whom the subjects of this study lived with prior to program entry revealed that for the total population, only 30.8% resided with both natural or adopted parents. Individually, 30.0% of the subjects in the participating group lived with both natural or adopted parents while 31.7% of the comparison group lived with both natural or adopted parents prior to entry into the program. Table 15 presents a breakdown of whom the subjects of this study resided with prior to program entry.

Table 15

Whom Lived With Prior to Entry

Category	Frequency	
	Eckerd	State
Both Natural Parents	13	19
Both Adopted Parents	5	0
Natural Mother	15	20
Natural Father	2	4
Mother and Stepfather	16	10
Father and Stepmother	3	2
Other Relative	3	4
Foster Home	1	0
Group Home	0	1
Other	2	0
Total	60	60

Annual Family Income

The data revealed that the annual family income for the subjects in the participating group averaged $7,950.00 each year. The annual family income for those in the comparison group averaged $8,380.00 each year. The range of the annual family income for both groups was from zero to $22,000.00 each year.

Number of Children in Family

The data relating to the number of children in the families of the subjects of this study indicated:

— Participating group had 4.50 children per family.

Comparison group had 4.85 children per family.

Birth Order

The birth order of the subjects of this study was divided into three categories. These categories were first, last, and middle birth order. The middle category contained all the subjects not falling in the first or last category. There were no single-child families.

The data from this variable revealed that for the total population (n=120), 24.00% of the subjects were the first born in the family while 28.00% were the last born of the family. Within the participating group, 16.67% were the first born in the family and 33.33% were the last born. Within the comparison group, 31.67% of the subjects were the first born in the family and 25.00% were the last born. Table 16 presents a breakdown of the birth order of the subjects of this study.

School Grade at Entry

The data from this variable revealed that the subjects in the participating group averaged being in grade 6.60 at the time of their entry into the program. Those members of the comparison group averaged being in grade 7.66. Table 17 presents a complete breakdown of the data for this variable.

IQ

The average IQ for the subjects in the participating group was 90.2 while the average IQ for those in the comparison group was 84.2.

Table 16

Birth Order of Subjects

Frequency Percent	Category 1*	 2**	 3#
Eckerd	10	30	20
Program	16.67	50.00	33.33
State	19	26	15
Schools	31.67	43.33	25.00
Total	29	56	35
	24.17	46.67	29.17

*first born

**all not first or last born

#last born

Table 17

School Grade at Entry

Frequency	Grade Level					
Percent	4	5	6	7	8	9
Eckerd	2	9	11	28	9	1
Program	3.33	15.00	18.33	46.67	15.00	1.67
State	0	0	3	23	20	10
School	0.00	0.00	5.36	41.07	35.71	17.86
Total	2	9	14	51	29	11
	1.72	7.76	12.07	43.97	25.00	9.48

Eckerd Program: N=60 Mean=6.60 SD=1.076

State School: N=60 Mean=7.66 SD=.837

Analysis of Pre-Treatment Comparison

Analysis of the pre-treatment comparison data was made utilizing three statistical procedures (t-test, correlation coefficient matrix, and discriminant analysis).

T-Test

In using the t-test procedure, the primary interest was in discovering and evaluating differences between variables, rather than the variables themselves. Analysis of the t-tests of the pre-treatment variables indicated statistically significant differences ($p \leq .05$) existed between the participating and comparison groups on the variables (see Table 18):

1. Age at entry (AE).
2. School grade at entry (S1).
3. Number of legal convictions one year prior to entry (L1).
4. Severity of second most recent conviction (L6).
5. Severity of third most recent conviction (L7).
6. Number of legal referrals for all years prior to entry (R5).
7. Number of youth commitments for all years prior to entry (C1).
8. Number of youth commitments one year prior to entry (C2).
9. Intelligence quotent (IQ).

Correlation Coeffecient Matrix

Using the pre-treatment variables which t-tests indicated statistically significant differences between the participating and comparison groups, a correlation coeffecient matrix was developed (see Table 19). The primary interest was in discovering if a significant correlation existed between variables. Any correlation coeffecient less than .5 was not considered significant. From the matrix it can be seen that:

1. The number of youth commitments for all years prior to entry (C1) and the number of youth commitments one year prior to entry (C2) have significant correlation (.606).
2. The age at entry (AE) and school grade at entry (S1) have significant correlation (.754).

The results of the correlation coeffecient matrix suggest that each pair of variables are measuring the same constructs. Therefore, each pair of variables was collapsed into a single variable prior to using them in other statistical analysis.

Discriminant Analysis

Discriminant Analysis indicated the two groups were nearly similar (see Table 20). Group assignment was used as the dependent variable and the pre-treatment variables, which t-test indicated were not significantly different, were used as the independent variables. The discriminant analysis revealed that 41.67% (n=50) of the total population should be placed in the Eckerd Camping Program and 58.33% of the total population should be placed in the State Training Schools. The discriminant analysis also misplaced 41.67% (n=25) subjects of the participating group into the comparison group and misplaced 25.00% (n=15) subjects of the comarison group into the participating group. This supports the supposition that there is little support for a unifying pattern of variable that are unique to each group. This randomness may then support the absence of any strong differences between the groups.

Table 18

T-Test for Pre-Treatment Variables

Group	Var	N	Mean	SD	T	Df
Eckerd	L1	60	1.983	1.334	2.558*	118
State	L1	60	1.450	0.909		
Eckerd	L2	60	0.483	0.833	-0.563	118
State	L2	60	0.583	1.094		
Eckerd	L3	60	0.233	0.745	0.744	118
State	L3	60	0.150	0.444		
Eckerd	L4	60	2.850	2.090	1.794	118
State	L4	60	2.233	1.651		
Eckerd	PC1	60	3.217	1.648	-0.298	118
State	PC1	60	3.300	1.406		
Eckerd	PC2	60	2.533	1.761	2.044	118
State	PC2	60	1.833	1.984		
Eckerd	PC3	60	1.417	1.835	3.404*	118
State	PC3	60	0.450	1.213		

(continued)

Table 18 (continued)

Eckerd	R5	60	4.533	3.332	-2.421*	118
State	R5	60	6.033	3.454		
Eckerd	R6	60	3.133	2.480	1.347	118
State	R6	60	2.617	1.637		
Eckerd	C1	60	0.367	0.882	2.215*	118
State	C1	60	0.100	0.302		
Eckerd	C2	60	0.250	0.437	2.492	118
State	C2	60	0.083	0.279		
Eckerd	C3	60	1.617	3.355	1.332	118
State	C3	60	0.867	2.789		
Eckerd	C4	60	0.017	0.129	1.000	118
State	C4	60	0.000	0.000		
Eckerd	F4	60	4.533	2.994	1.258	118
State	F4	60	3.867	2.807		
Eckerd	INC	60	7.950	4.292	-0.478	118
State	INC	60	8.317	4.131		
Eckerd	F2	60	4.500	1.953	-0.918	118
State	F2	60	4.850	2.217		
Eckerd	F3	60	2.133	0.700	1.503	118
State	F3	60	1.933	0.756		
Eckerd	S1	60	6.600	1.077	-5.805*	118
State	S1	60	7.617	0.825		
Eckerd	IQ	60	90.217	9.636	3.200*	118
State	IQ	60	84.217	10.864		

(continued)

Table 18 (continued)

Eckerd	AE	60	13.267	1.198	-5.693*	118
State	AE	60	14.275	0.668		

*significant at the .05 level

Variable legend:

L1- Number of legal convictions one year prior to entry.

L2- Number of legal convictions 1-2 years prior to entry.

L3- Number of lagal convictions 2-3 years prior to entry.

L4- Number of lagal convictions for all years prior to entry.

L5- Severity of most recent conviction prior to entry.

L6- Severity of second most recent conviction prior to entry.

L7- Severity of third most recent conviction prior to entry.

R5- Number of youth referrals for all years prior to entry.

R6- Number of youth referrals one year prior to entry.

C1- Number of youth commitments for all years prior

(continued)

Table 18 (continued)

to entry.

C2- Number of youth commitments forone year prior to entry.

C3- Type of last commitment.

C4- Typr of next to last youth commitment.

F4- Whom lived with at time of entry.

INC- Total annual family income.

F2- Number of children in family.

F3- Birth order of subject in relation to siblings.

S1- School grade at entry.

IQ- Intelligence quotent.

AE- Age at entry.

Table 19

Correlation Coefficient Matrix

For Variables Having Significant Differences

	L1	L6	L7	R5	C1	C2	S1	IQ	AE
L1	1.000								
L6	0.332	1.000							
L7	0.360	0.353	1.000						
R5	0.097	-0.064	0.123	1.000					
C1	0.131	0.152	0.302	0.115	1.000				
C2	0.227	0.167	0.284	0.180	0.606	1.000			
S1	-0.015	0.034	-0.122	-0.004	-0.016	-0.107	1.000		
IQ	0.134	-0.006	0.004	-0.181	0.054	0.011	-0.035	1.000	
AE	-0.006	0.083	-0.066	0.079	-0.016	-0.042	0.754	-0.133	1.000

Table 20

Number of Observations and Percents Classified Into Groups by Discriminant Analysis

From Program Percents	Eckerd Program	State Schools	Total
Eckerd Program	35	25	60
	58.33	41.67	100.00
State Schools	15	45	60
	25.00	58.33	100.00
Total	50	70	120
	41.67	58.33	100.00

Post-Treatment Data

The data gathered from the juvenile courts, regional offices of the Florida Department of Health and Rehabilitati~~ve~~ Services, and the public school system was used to compare the two groups on the variables of court contacts, severity of court contacts, length of enrollment, and achievement level.

Court Contacts

The data revealed that 45% (n=27) of the subjects from the participating group had court contacts during the first six months after release from the Eckerd Wilderness Camping Program. The data also revealed that 70% (n=42) subjects in the comparison group had court contacts during the first six months after they were released from the State Training Schools.

During the second six months after their relaese from their respective programs, 30.0% (n=18) of the participating group had court contacts while 36.7% (n=22) of the comparison group had court contacts.

During the final six months of the study, 31.7% (n=10) of the participating group had court contacts while 28.3% (n=17) of the comparison group had court contacts.

Data relating to court contacts by the participating and comparison groups during the post-treatment time of this study is presented in Table 21.

Table 21

Court Contacts After Treatment

Period*	Eckerd Program				State Schools			
	Yes	%	No	%	Yes	%	No	%
First 6 Months	27	45.0	33	55.0	42	70.0	18	30.0
Second 6 Months	18	30.0	42	70.0	22	36.7	38	63.3
Third 6 Months	19	31.7	41	68.3	17	28.3	43	71.7

*each period is discrete, therefore court contacts are not cumulative and subjects can have court contacts in each period of time.

Severity of Court Contacts

The severity of the acts perpetrated by the juvenile delinquents after their rehabilitation programs appeared to be similar in nature to the acts committed which brought them into contact with the courts originally. In order to form a more usable data base, the F.B.I. arrest codes were grouped into five categories which were:

1. All status offenses, parole, or probation violations.
2. All alcohol or narcotic related offenses.
3. All sex related offenses.

4. All crimes against property.

5. All crimes against persons.

During the first 6 months after release from the Eckerd Wilderness Camping Program, 16.9% (n=10) of the participating group committed acts considered to be status offenses and 23.7% (n=14) committed criminal acts against property while three criminal acts against persons were perpetrated. During the same period of time, 25.0% (n=15) of the comparison group committed acts considered status offenses and 38.3% (n=23) committed criminal acts against property. Two members of the comparison group committed criminal acts against persons.

During the second 6 months of the study, the number of status offenses and crimes against property committed by the participating group showed a reduction. The number of status offenses and crimes against property committed by the comparison group also showed a slight reduction. However, within the comparison group the number of criminal acts against persons increased.

During the last six months of the study, the number of status offenses committed by both groups showed a reduction. A reduction in criminal acts against persons by the comparison group was also noted.

The severity of court contacts made by the participating and comparison groups during this study is presented in Table 22.

Table 22

Severity of Court Contacts After Program Departure

Time	Group	Severity				
		1	2	3	4	5
First 6 Months	Eckerd Program	10	0	0	14	3
	State Schools	15	1	1	23	2
Second 6 Months	Eckerd Program	7	0	0	10	1
	State Schools	4	0	1	12	5
Third 6 Months	Eckerd Program	3	1	2	10	2
	State Schools	2	1	1	12	1

Severity Code: 1- Status Offenses 2-Sex Offenses 3- Drug Related Offenses 4- Crimes Against Property 5- Crimes Against Persons

Length of School Enrollment

The data relating to the length of enrollment in school by the participating group indicated that 50.8% (n=30) remained for the entire first 6 month period. However, only 28.3% (n=17) of the comparison group remained in school for the first 6 month period of the study.

During the second 6 month period, 37.3% (n=22) of the participating group remained in school while only 16.7% (n=10) of the comparison group remained in school.

The number of the participating group who remained in school for the last 6 months of the study was reduced to 13 (22%). The data also indicated that 9 (15%) members of the comparison group were enrolled in school

The data on length of enrollment in school by members of both groups in the study is presented in Table 23.

Academic Achievement Level

The achievement level in school work by the participating group during the first 6 months after release from the Eckerd Wilderness Camping Program indicated that the majority of those in school was below average. The data also indicated that the majority of the comparison group also achieved below average in school work after being released from the State Training Schools.

Table 23

Length of School Enrollment

Group	Length (in months)						
	0	1	2	3	4	5	6
First 6 Months							
Eckerd Program*	14	1	0	3	9	2	30
State Schools	24	4	2	7	5	1	17
Second 6 Months							
Eckerd Program*	33	1	1	2	0	0	22
State Schools	43	3	0	3	0	1	10
Third 6 Months							
Eckerd Program*	42	1	1	1	1	0	13
State Schools	51	0	0	0	0	0	9

*n=59 (one subject died during study)

Table 24

Academic Achievement Level

Group	Level 1^a	 2^b	 3^c
First 6 Months			
Eckerd Program	5	15	25
State Schools	2	11	23
Second 6 Months			
Eckerd Program	3	11	12
State Schools	1	9	7
Third 6 Months			
Eckerd Program	3	6	9
State Schools	1	5	3

[a] above average

[b] average

[c] below average

Analysis of Post-Treatment Data

The problem posed by this study was to compare two groups of juvenile delinquents from different rehabilitation programs. The comparison was based on differences determined by examining the variables court contacts and school adjustments over three six-month periods of time. An assumption of the study was that the two groups were considered to be comparable, based on the specified pre-treatment variables. However, it was recognized that differences did exist in some pre-treatment variables. Since these differences were significant (p=.05), a multivariate analysis of the post-treatment data was made, where possible, which included those pre-treatment variables which showed significant differences. This process removed some of the extraneous variance, thereby increasing measurement precision.

Court Contacts

The analysis of the variable of court contacts, which measured the number of subjects who came into contact with a juvenile court during the post-treatment phase of the study, was made by using a chi-square test of significance. The result of the chi-square test indicates that during the first 6 months after being released from the Eckerd Wilderness Camping Program, the participating group had significantly (p=.05) fewer court contacts than the subjects of the comparison group.

During the second and third 6 month period, the chi-square test indicated no significant differences existed between the participating and comparison groups on the variable of court contacts.

The results of the chi-square test of significance is presented in Table 25.

Table 25

Chi-Square Test of Significance

for Post-Treatment Variable

Court Contacts

Variable	Period	Eckerd	State	X^2
Court Contact	1st. 6 Months	27	42	6.684*
Court Contact	2nd. 6 Months	18	22	.338
Court Contacts	3rd. 6 Months	19	17	.040

*significant at the .05 level.

Df all cases=1

Severity of Court Contacts After Treatment

An analysis of covariance design was used to analyze the variable severity of court contacts. The pre-treatment variables, which indicated significant differences existed between the participating and comparison groups prior to program entry, were inserted into the design to remove this extraneous variance, thereby increasing measurement precision. The results of this analysis revealed that no significant differences existed between the two groups. The analysis also indicated no significant differences existed between the groups in relation to time. Therefore, the data suggested no significant differences between the groups on the variable of severity of court contact throughout the period of the study. The results of the analysis of covariance for the variable severity of court contacts is presented in Table 26.

Table 26

Analysis of Covariance for the Variable of Severity of Court Contacts

Source	Df	SS	MS	F
Covariate	1	6.984	6.984	1.74
Group	1	14.597	14.597	3.65
Error	117	468.564	4.005	
Time	2	33.016	16.508	6.11
Group/Time	2	7.705	3.853	1.43
Error (G/T)	236	637.271	2.700	

Length of School Enrollment

Analysis of covariance design was used to analyze the variable of length of school enrollment. The same pre-treatment variables used in the analysis of severity court contacts was used in the analysis of the variable length of enrollment. The results of the analysis of covariance indicated that the participating group remained in school significantly (p=.05) longer than the comparison group. The analysis also indicated the difference existed throughout the three, 6 month time periods of the study. The results of the analysis of covariance for the variable length of enrollment is presented in Table 27. The group means for each 6 month interval is presented in Table 28.

School Achievement Level

Analysis of covariance design was used to analyze the variable of school achievement level. The same pre-treatment variables used in the analysis of severity of court contacts and length of enrollment were used again in the analysis of the variable of school achievement level. The results of the analysis of covariance indicated that the participating group had a significantly (p=.05) higher achievement level than the comparison group. The higher achievement level was consistant throughout the three time periods of this study. The results of the analysis of covariance for the variable achievement level is presented in

Table 29. The group means for each 6 month interval is presented in Table 30.

Table 27

Analysis of Covariance for the Variable
Length of School Enrollment

Source	Df	SS	MS	F
Covariate	1	2.167	2.167	0.16
Group	1	96.884	96.884	7.07*
Error	116	1588.603	13.695	
Time	2	276.853	138.427	59.90*
Group/Time	2	9.965	4.982	1.98
Error (G/T)	234	589.970	2.521	

*significant at the .05 level

Table 28

Group Means for Each 6 Month Interval
for Variable Length of School Enrollment

Group	1	2	3	Overall
Eckerd Program	4.00	2.39	1.49	2.63
State Schools	2.60	1.28	0.90	1.59

Table 29

Analysis of Covariance for the Variable of School Achievement Level

Source	Df	SS	MS	F
Covariate	1	2.853	2.853	1.02
Group	1	11.963	11.963	4.75*
Error	116	292.374	2.520	
Time	2	89.043	44.522	56.77*
Group/Time	2	0.070	0.070	0.04
Error (G/T)	234	183.503	0.784	

*significant at .05 level

Table 30

Group Means for Each 6 Month Interval for the Variable of School Achievement Level

Group	1	2	3	Overall
Eckerd Program	1.86	1.03	0.71	1.20
State Schools	1.55	0.67	0.33	0.85

CHAPTER V

CONCLUSIONS

The problem addressed by this study was: do juvenile delinquents, referred by the Florida Department of Health and Rehabilitative Services to the Eckerd Wilderness Camping Program, differ significantly from a comparison group referred to Florida Training Schools on the variables of court contacts and school adjustment?

The two rehabilitation programs involved in this study were the Eckerd Wilderness Camping Program and the State Training Schools. The Eckerd Wilderness Camping Program is an innovative and alternative rehabilitation program for disturbed youth which has as its theoretical base, a wilderness therapeutic camping model. The Eckerd Wilderness Camping Program was introduced into Florida by the Jack and Ruth Eckerd Foundation of Clearwater, Florida, and was modeled after the Dallas Salesmanship Boys Camp of Dallas, Texas. The State Training Schools are the traditional rehabilitation program for juvenile delinquents. The State Training Schools today have evolved from their original beginning in

1900.

The population of the study consisted of 120 male juvenile delinquents referred to a rehabilitation program by the Florida Department of Health and Rehabilitative Services. The participating group (n=60) was the last campers who successfully completed the Eckerd Camping Program prior to January 1, 1978. The comparison group (n=60) was a stratified sample of graduates from the State Training Schools who completed the program prior to January 1, 1978. The stratification was based on age and intelligence quotient. This was necessary to ensure adequate comparison of the two groups. Each member of the comparison group met the qualifications necessary to be accepted into the Eckerd Wilderness Camping Program.

Given the problem of the study and by reviewing the related literature, three six-month time periods following the subjects release from their respective programs were selected for the study. The hypotheses tested were: there is no significant difference between the participating and comparison groups on the variables of school adjustment and court contacts, as measured by the examinations of these variables, 6, 12, and 18 months after release or parole date. Two subhypotheses were also tested: (a) there is no significant differences between the participating and the comparison groups on the variable of school adjustment when the variable of court contacts is held constant: (b) there is no significant differences between participating and comparison groups on the variable of court contacts when the variable of school adjustment is held constant. A statistical significance level of .05 was used for this study.

Pre-Treatment Comparison Conclusions

To determine the comparability of the participating and comparison groups, data on 20 variables was collected and analyzed. An effort was made to establish a comparison group which was close to being a matched group. However, due to the possible range of the various variables, significant differences existed between the two groups (see Table 18). Those significant differences were:

1. The mean age at entry of the participating group was 1.01 years younger than the mean age of the comparison group at entry.
2. The mean school grade at entry for the participating group was 6.6 while the mean school grade at entry for the comparison group was 7.66. Therefore, the comparison group was 1.06 school grades ahead of the participating group.
3. The participating group had an average of .53 convictions more than the comparison group had for the year prior to entry.

4. The second most recent convictions for the participating group were more severe than the second most recent convictions of the comparison group.
5. The third most recent convictions of the participating group were more severe than the convictions of the comparison group.
6. The number of legal referrals for all years for the comparison group was greater than the participating group.
7. The participating group had a greater number of prior youth commitments for all years than the comparison group.
8. The participating group also had a greater number of prior youth commitments during the year prior to entry than the comparison group.
9. The intelligence quotient for participating group was higher than those in the comparison group.

The pre-treatment data indicates those differences between the participating and comparison groups existed prior to entry into their respective programs. Since the basic assumption was that the two groups would be comparable, these differences posed a problem for the study. However, the results of the covariance analysis indicated that although the pre-treatment variables were noticeable, they were not strong enough to be of overall significance. When the nine pre-treatment variables were entered into the covariance analysis design, the resulting covariates (F Statistic) were 1.74, 1.02, and 0.16 (See Tables 26, 27, and 29). Therefore, it was concluded that, although differences between the participating and comparison groups did exist prior to program entry, these differences were not collectively significant.

Post-Treatment Conclusions

Discussion

As noted earlier, the purpose of this study was to compare two groups of juvenile delinquents who had completed separate and different rehabilitation programs. The changes were measured by the variables of court contacts and school adjustment. The first variable, court contacts, is of central importance to the Department of Health and Rehabilitative Services. One area of administration which is most often brought to the attention of the state legislature has to do with the ever-increasing cost of juvenile delinquent rehabilitation programs. Therefore, the variable court contacts by juvenile delinquents who have recently completed a rehabilitation program, is a measure of success not only for the juvenile delinquent but for the Department of Health and Rehabilitative Services. Two elements of court contacts considered in this study were: (1) the number of times juvenile delinquents come into contact with the courts and (2) the severity of the act which brought them into contact with the courts.

The second variable, school adjustment, is also of potential importance in juvenile delinquency rehabilitation. However, unlike the variable court contacts, the potential is viewed differently. Court contacts are viewed as an immediate indicator of program success. The variable school adjustment, on the other hand, represents an indirect indicator of success when viewed by state program administrators. For this study, two elements of school adjustment, were considered. First, it was considered that the length of time a delinquent remained in school after release from their program, would be an indication of rehabilitation. Second, the level of academic achievement would indicate a willingness to spend time in an educational activity rather than be out on the streets being engaged in delinquent activities. Therefore, academic achievement level would also be an indication of rehabilitation.

Test of Hypotheses

The hypothesis (H_1) that there is no significant difference between participating and comparison groups on the variables of school adjustment and court contacts, as measured by an examination of these variables 6 months after release date, was not supported by the data. The statistical analysis revealed that, after adjusting for the effects of pre-treatment differences the participating and comparison groups had, the participating group had significantly lower scores on the variable of court contacts and significantly higher scores on the variable of school adjustments.

The subhypothesis (H_{1a}) that there is no significant difference between participating and comparison groups on the variable of school adjustment when the variable of court contacts is held constant, was not supported by the data. Two variables, length of school enrollment and academic achievement level, were used to measure school adjustment. The data indicated that the participating group remained in school significantly longer than the comparison group. The data also indicated that the academic achievement level attained by the participating group was significantly higher than the academic achievement level of the comparison group.

The subhypothesis (H_{1b}) that there is no significant difference between participating and comparison groups on the variable of court contacts when the variable of school adjustment is held constant, was supported by the variable of severity of offenses. The data indicated no significant difference between the participating and comparison groups on the variable severity of offenses committed. However, the data on the second variable used to measure court contacts, the number of subjects having court contacts, indicated the participating group had significantly fewer court contacts than the comparison group.

The hypothesis (H_2) that there is no significant difference between the participating and comparison groups on the variables of school adjustment and court contacts, as measured by an examination of these variables 12 months after release date, was supported by the data from one variable but was not supported by the data from the other variable. The statistical analysis indicated that after adjusting for the effects of the pre-treatment differences the participating and comparison groups had, there were no significant differences between the participating and comparison groups on the variable of court contacts. However, the statistical analysis for the variable school adjustment indicated the participating group had school adjustment scores significantly higher than the academic achievement scores for the comparison group.

The subhypothesis (H_{2a}) that there is no significant differences between the participating and comparison groups on the variable of court contacts when the variable of school adjustment is held constant, was supported by both the variables of number of court contacts and the severity of offenses. Statistical analysis of the variable number of court contacts made by the subjects of both groups indicated no significant difference. Statistical analysis of the variable of severity of offenses committed by the participating and comparison groups indicated no significant differences.

The subhypothesis (H_{2b}) that there is no significant difference between the participating and comparison groups on the variable of school adjustment, when the variable of court contacts is held constant, was not supported by the variables of length of school enrollment or academic achievement level. Statistical analysis of the variable length of school enrollment indicated the participating group remained in school significantly longer than the comparison group. Statistical analysis of the variable of academic achievement level indicated the participating group's academic achievement level was significantly higher than the academic achievement level of the comparison group.

The hypothesis (H_3) that there is no significant difference between the participating and comparison groups on the variables school adjustment and court contacts, as measured by an examination of these variables 18 months after release date, was supported by the data from one variable but was not supported by the data from the other variable. The statistical analysis indicated that after adjusting for the effects of the pre-treatment differences in the participating and comparison groups, there were no significant differences between them on the variable of court contacts. However, the statistical analysis for the variable of school adjustment indicated the participating group had school adjustment scores significantly higher than the academic achievement scores for the comparison group.

The subhypothesis (H_{3a}) that there is no significant difference between the participating and comparison groups on the variable of court contacts when the variable of school adjustment is held constant, was supported by both the variables of number of court contacts and the severity of offenses. Statistical analysis of the variable of number of court contacts made by the subjects of both groups indicated no significant difference. Statistical analysis of the variable of severity of offenses committed by the participating and comparison groups indicated no significant difference.

The subhypothesis (H_{3b}) that there is no significant difference between the participating and comparison groups on the variable of school adjustment when the variable court contacts is held constant, was not supported by the variables of length of school enrollment or academic achievement level. Statistical analysis of the variable length of school enrollment indicated the participating group remained in school significantly longer than the comparison group. Statistical analysis of the variable of academic achievement level indicated the participating group's academic achievement level was significantly higher than the academic achievement level of the comparison group.

Summary

In summary, this research revealed that in comparison with the state training school graduates, the Eckerd campers prior to program entry were:

1. Younger (1.01 years).
2. Had a lower school grade of entry (1.06 grades).
3. Had more youth convictions in the year prior to entry (.53 convictions).
4. Committed more severe crimes (2nd and 3rd convictions).
5. Had fewer legal referrals for all years.
6. Had a greater number of prior youth commitments.
7. Had a higher IQ.

In comparing the Eckerd campers with the state training school graduates over an 18 month period following program release, analysis of data revealed that for the first six-month period after release:

1. Eckerd campers had significantly fewer court contacts than the state group.
2. There was no difference in the severity of offenses committed.
3. Eckerd campers remained in school significantly longer than the state group.
4. Eckerd campers attained a significantly higher academic achievement level in school than the state group.

During the second and third six-month period of this study, analysis of data indicated:

1. There was no difference between the two groups in the number of court contacts.
2. There was no difference between the two groups in the severity of offenses committed.
3. Eckerd campers remained in school significantly longer than the state group.
4. Eckerd campers attained a significantly higher academic achievement level in school than the state group.

During the collection of data for use in this study, data was also collected regarding the number of subjects who were recommitted to a rehabilitation program after being released. This data was not used in the study because of the variance in the severity of offenses committed which resulted in the subjects being recommitted. However, the data did reveal that 33 (55.9%) of the Eckerd campers and 43 (71.7%) of the state graduates were recommitted to a rehabilitation program after release.

Possibilities for Further Research

The therapeutic aspects of the Eckerd Wilderness Camping Program are of great interest. While the problems posed by this research did not address what actually takes place in the therapeutic process, the results suggest certain aspects of the program produced positive changes in the behavior of the juvenile delinquents who attended the program.

One area of interest in the therapeutic camping program worthy of further research is school adjustment. The therapeutic program, during the period of this study, had no formal educational activities for the campers of this study. Therefore, the campers remained in camp for an average of 15.9 months without the benefit of organized educational effort. However, the results of this study indicated the campers were willing to invest time in educational activities after release from their program. This length of time was longer than the time graduates of the conventional State Training Schools were willing to invest, even though the state schools were organized around a formal educational program.

The second area of interest in the therapeutic camping program is court contacts. Data from this study indicated campers committed fewer juvenile delinquent acts than graduates from the conventional rehabilitation program committed during the first six months after release. This finding was in variance with the findings of Saake (1972). Saake found a very high rate of recidivism (68.7%) during the first six months following camp school release. Therefore, the findings of this study suggest something in the therapeutic camping process causes the juvenile delinquent to commit fewer delinquent acts. The causal factor could be in the process or possibly the organizational nature of the program. However, the data indicates that after the campers have been out of camp for over six months, the differences noted during the first six months disappear, suggesting that maturation and environment have taken effect. The question for research then is: how long do the effects of the program last after the camper leaves the program? Since the data suggests the need for an after-care treatment, the answer to the research question would provide management guidelines for the length of time the after-care program would be needed.

A second research problem would be to develop a prediction instrument which would provide the after-care personnel with a tool to select those campers who would benefit most from an after-care treatment.

Recommendations

1. Research be conducted to determine why campers from the Eckerd Wilderness Camping Program commit fewer juvenile delinquent acts after leaving the program than the predicted norms from other re-

search.

2. Research be conducted to determine how long the effects of the camping program last.
3. Replicate this study using campers who have completed the Eckerd Wilderness Camping Program after the transitional classroom was instituted.
4. Develop a prediction instrument for predicting the campers who will most likely require special after-care treatment.
5. Establish an effective camper after-care treatment program to assist those campers in need of such treatment.

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